**BP Testimony to House Science Committee**
**Subcommittee on Energy**
**Regarding the U.S. Department of Energy's**
**Climate Change Technology Program**
**Strategic Plan**

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Madame Chairman, members of the Subcommittee – thank you for the opportunity today for BP to participate in this discussion about the Administration's approach to climate change-related technology research, development, demonstration and deployment.

BP is involved in many discussions in the U.S. about climate change. Our objective is to establish how we might most effectively contribute to the task of providing the energy that is necessary to underpin economic growth, while avoiding dangerous interference in the climate system. While the debate continues around the long term goal and identifying a full set of policy options, we should take action where there does appear to be agreement.

One of these areas is technology. Other policy instruments will be necessary to address climate change, but technological innovation is central. The development of the Strategic Plan clearly recognizes this critical role of technology.

The Climate Change Technology Program's Strategic Plan is comprehensive and well considered. It acknowledges the important role of technology in reducing GHG emissions, providing a framework for identifying, developing and deploying technologies.

I would like to briefly touch on what we view as important components of the Plan, and touch upon what we view as opportunities to improve the Plan.

We share the stated ultimate goal of the Strategic Plan – the stabilization of GHG concentrations in the atmosphere at a level that prevents dangerous interference with the climate system. Of course, there are uncertainties in the science, there always will be, but we believe that based on

current science it is only prudent to take action. The Strategic Plan is an acknowledgement of this need to take action.

The Plan acknowledges that the overwhelming majority of GHG emissions will be associated with equipment and infrastructure that has yet to be built, but once built will constrain our future options. So while we recognize the importance of getting started, and the need for short term emission reductions, we believe the primary focus should be on future investment decisions, ensuring that the best technological options are available and used.

By 2030 the world's consumption of electricity is expected to double, as economies grow. However, the power sector is already the largest single source of GHGs emissions, and as demand grows so will emissions. This growth in demand for electricity is a business opportunity, as over half of the power plants that will be needed have yet to be built. The Plan helps to determine what the technological options are for these investments.

The same is true for the transport sector, where we must develop and invest in both the best available vehicle and fuel technology, as well as looking to improve mobility more generally.

The Plan recognizes that we need research on both renewable and fossil fuels. Solar, wind, biofuels and other alternative energy sources one day will be able to meet a significant part of U.S. and world energy demand. But we also need to develop the technology that allows the U.S. to utilize fossil fuels, and particularly coal. Fossil fuels currently supply about 80% of all primary energy and will remain fundamental to global and U.S. competitiveness and energy supply for many decades.

BP is taking action in many areas, including major investments in both the power and transport sectors. BP Alternative Energy provides clean power from wind, solar, gas-fired and hydrogen power. We have already committed to investing $8 billion over the next 10 years in this business. We are pleased to see that these alternatives are comprehensively addressed in the Strategic Plan.

As an example let me briefly talk about Carbon Capture and Storage technology, which sits at the heart of our new hydrogen power business. Over the next 10 years BP, in partnership with GE, aims to develop 10 to 15 hydrogen power projects. BP, together with Edison Mission Energy, has already announced its plans for a hydrogen power plant in Southern California, an investment of over $1 billion dollars. The facility will utilize a low value by-product of the refining process,

petroleum coke, to generate much needed supplies of electricity to the Southern California market. The project will accomplish this by gasifying the petroleum coke and using the resulting hydrogen to drive a turbine to generate electricity. The CO2 produced by the process will be transported by pipeline to a California oilfield where it will be injected deep underground, both stimulating domestic oil production and permanently storing the CO2.

Where we see opportunity to improve the Strategic Plan is in increased clarity about the scale of the task, the emphasis we would place on Learning-By-Doing, and finally a clearer definition of the necessary public and private partnership.

While it is not the role of Plan to determine stabilization goal, without one it is difficult to know whether the plan will deliver sufficient emission reductions at an optimal cost.

Many technologies already exist, and we would like to see greater focus upon deployment and diffusion of these technologies, particularly engineering cost reduction, removal of institutional barriers and the building of material new markets. Many barriers are institutional and behavioral and, as such, the social sciences can make a significant contribution.

Finally, the opportunity exists to better define how government will interact with the private sector. Government and business each play key but distinct roles in developing and deploying technology. We would like to see more thought given to encouraging innovative public-private partnerships.

In conclusion, let me say that it would be difficult, if not impossible, to make a determination as to whether the Strategic Plan, by itself, is capable of meeting the President's goal of reducing GHG intensity. The answer to this question depends largely on the level of success of individual technologies, having the proper regulatory frameworks in place, public acceptance, and an environment in which companies can feel comfortable making long term investments in these technologies at the necessary scale.

What I can say is that the Plan is a helpful and necessary step. BP looks forward to playing a role in the successful implementation of the Plan.

Thank you and I look forward to answering any questions you may have.